

REMARKS

Claims 1-24 are pending in this application, of which claims 1, 2, 9, 10, 17, and 18 are independent. Applicant acknowledges, with appreciation, the Examiner's indication that claims 8 and 16 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

In this Amendment, claims 1, 2, 5, 7, 9, 10, 13, 15, and 17-24 have been amended. The specification has also been amended. Care has been exercised to avoid the introduction of new matter. Support for the present Amendment should be apparent throughout the written description of the specification.

Information Disclosure Statement

The Information Disclosure Statement was filed on March 26, 2007. Applicant respectfully requests the Examiner to acknowledge receipt of the IDS when reviewed and provide a copy of the PTO-1449 form appropriately initialed indicating consideration of the cited references.

Specification

Objection has been made to the abstract of the disclosure. The abstract has been amended in the manner suggested by the Examiner. Withdrawal of the objection to the specification is, therefore, respectfully solicited.

Claim Objections

Claim 2 has been objected to because of the informalities. Applicant has amended claim 2 to address the informalities identified by the Examiner. Withdrawal of the objection to claim 2 is, therefore, respectfully solicited.

Claims 17-24 have been rejected under 35 U.S.C. §101.

The Examiner asserted that the claimed invention is directed to non-statutory subject matter because claims 17-24 recite a computer program without a computer readable medium.

Claims 17-24 have been amended to recite a recording medium storing a program executable by a computer. Accordingly, the claimed invention is directed to statutory subject matter under 35 U.S.C. §101. Applicant, therefore, respectfully solicits withdrawal of the rejection of the claims.

Claims 1, 2, 5, 7, 9, 10, 13, 15, 17, 18, 21, and 23 have been rejected under 35 U.S.C. §102(b) as being anticipated by Yukitomo et al.

In the statement of the rejection, the Examiner asserted that Yukitomo et al. discloses a data communication apparatus identically corresponding to what is claimed.

Applicant submits that Yukitomo et al. does not disclose a receiver including all the limitations recited in independent claim 1. Specifically, Yukitomo et al. does not disclose, at a minimum, the following limitations:

a controller which instructs the switching unit to switch the weighting coefficients from the plurality of first weighting coefficients to the plurality of second weighting coefficients; and ...

the signals input in the input unit are burst signals, and

the controller requests switching in the middle of the burst signals.

Yukitomo et al. discloses a data communication apparatus “capable of receiving radio signals without deterioration of reception performance even in the case where a radio signal’s direction of arrival changes rapidly” (column 2, lines 3-7). Specifically, the reference discloses that when signal quality deteriorates, second weight controller 104 is used in place of the first weight controller 103 to provide weights to be multiplied by a slot subsequently received. Based on Applicant’s study of Yukitomo et al., the reference teaches switching between weights on a slot to slot basis, i.e., on a burst signal to burst signal basis (see column 4, lines 15-45). Weights are not switched in the middle of processing a slot or a burst signal. In contrast, claim 1 requires switching from the plurality of first weighting coefficients to the plurality of second weighting coefficients in the middle of this a burst signal.

Accordingly, Yukitomo et al. does not identically disclose a receiver including all the limitations recited in independent claim 1. The above discussion is applicable to independent claims 2, 9, 10, 17, and 18. Dependent claims 5, 7, 13, 15, 21, and 23 are also patentably distinguishable over Yukitomo et al. at least because these claims respectively include all the limitations recited in independent claims 2, 10, and 18. Applicant separately argues that claims 5, 7, 13, 15, 21, and 23 are patentably distinguishable over Yukitomo et al.

Claim 5 requires that the first weighting coefficients be determined by using the second weighting coefficients used in the past for multiplication. As mentioned before, switching from the first weighting coefficients to the second weighting coefficients is done in the middle of a burst signal. Therefore, the second weighting coefficients already used for multiplication correspond to a burst signal which is different from the burst signal corresponding to the first weighting coefficients set by using the second weighting coefficients. In contrast, the first

weighting coefficient in Yukitomo is for a slot that precedes a slot to which the second weight coefficient is applied. Thus, when the first weighting coefficient is calculated by using the second weighting coefficient already calculated, the first weighting coefficient and the second weighting coefficient are with respect to the same slot. For example, as described in column 4, lines 50-55 of Yukitomo et al., the first weighting coefficient and the second weighting coefficient are for the same slot 302. Accordingly, claim 5 is neither disclosed nor suggested by Yukitomo et al. The above discussion is applicable to claims 13 and 21.

Claim 7 requires switching from the first weighting coefficients to the second weighting coefficients when an end of the training signal is detected. In contrast, Yukitomo et al. teaches switching weights in the event of a change in the radio signal's direction of arrival. The teaching of Yukitomo et al. is different from claim 7. Accordingly, claim 7 is neither disclosed nor suggested by Yukitomo et al. The above discussion is applicable to claims 15 and 23.

Based on the foregoing, Applicant respectfully solicits withdrawal of the rejection of claims 1, 2, 5, 7, 9, 10, 13, 15, 17, 18, 21, and 23 under 35 U.S.C. §102(b), and favorable consideration thereof.

Claims 3, 4, 11, 12, 19, and 20 have been rejected under 35 U.S.C. §103 (a) as being unpatentable over Yukitomo et al. in view of Kimata et al.

Claims 3, 4, 11, 12, 19, and 20 depend on independent claims 2, 10, and 18, respectively. Applicant incorporates herein the arguments previously advanced in responding to the rejection of independent claim 2, 10, and 18 under 35 U.S.C. §102 for anticipation evidence by Yukitomo et al. The Examiner's additional comments and secondary reference to Kimata et al. do not cure the previously argued deficiencies of Yukitomo et al. In the following, Applicant separately

argues that claims 3, 4, 11, 12, 19, and 20 are patentable over the applied combination of Yukitomo et al. and Kimata et al.

Kimata et al. teaches using antenna weights of a finger having the largest of SIRs (signal to noise ratios) when path timing of fingers is greatly changed. The antenna weights in this case represent the weighting coefficients occurring after switching. Therefore, in a combination of Yukitomo et al. and Kimata et al., the antenna weights of Kimata correspond to the second weighting coefficients of Yukitomo et al. Meanwhile, claims 3 and 4 are directed to the weighting coefficients occurring before switching. The claimed subject matter is different from the combination of Yukitomo et al. and Kimata et al. Claims 3 and 4 are neither disclosed nor suggested by Yukitomo et al. and Kimata et al., either individually or in combination. The above discussion is applicable to claims 11, 12, 19, and 20.

Based on the foregoing, the applied combination of Yukitomo et al. and Kimata et al. does not teach all the limitations recited in claims 3, 4, 11, 12, 19, and 20. Applicant, therefore, respectfully solicits withdrawal of the rejection of the claims and favorable consideration thereof.

Claims 6, 14, and 22 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Yukitomo et al. in view of Bottomley et al.

Claims 6, 14, and 22 depend from independent claims 2, 10, and 18, respectively. Applicant thus incorporates herein the arguments previously advanced in responding to the rejection of independent claims 2, 10, and 18 under 35 U.S.C. §102 for anticipation evidenced by Yukitomo et al. The Examiner's additional comments and secondary reference to Bottomley et al. do not cure the previously argued deficiencies of Yukitomo et al. In addition, Applicant

separately argues that claims 6, 14, and 22 are patentable over Yukitomo et al. and Bottomley et al.

According to Bottomley et al., updated weighting factors are produced using Least Mean Squares (LMS), starting with an initial set of weighting factors, i.e., by updating the initial set of weighting factors (column 14, lines 10-19). In contrast, claim 6 requires that the second weighting coefficients and the third weighting coefficients be derived without updating the first weighting coefficients. Thus, the second weighting coefficients and the third weighting coefficients as claimed are different from the updated weighting factors of Bottomley et al. Accordingly, claim 6 is neither disclosed nor suggested by Yukitomo et al. and Bottomley et al., either individually or in combination. The above discussion is applicable to claims 14 and 22.

Applicant, therefore, respectfully solicits withdrawal of the rejection of the claims and favorable consideration thereof.

Conclusion

It should, therefore, be apparent that the imposed rejections have been overcome and that all pending claims are in condition for immediate allowance. Favorable consideration is, therefore, respectfully solicited.

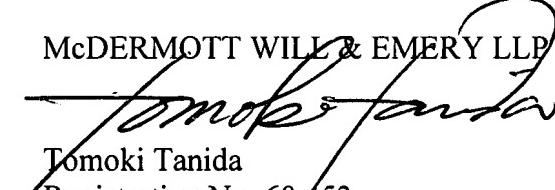
To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper,

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including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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